

# 2AV2

## Half-Wave Vacuum Rectifier

*Useful in High-Voltage, Low-Current Applications such as  
Pulse-Operated, Focus-Rectifier Circuits in Color TV Receivers*

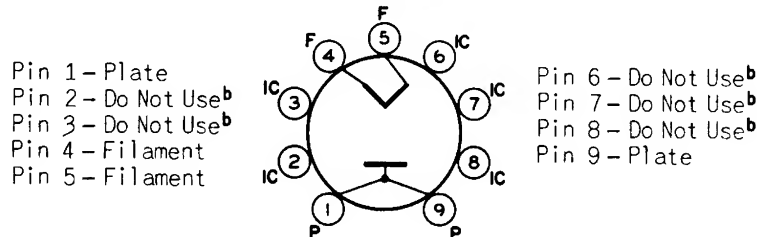
### ELECTRICAL

#### Filament Characteristics and Ratings

Voltage (AC) . . . . .	1.80 ± 0.27	V
Current at 1.80 V . . . . .	0.225	A ←
<b>Direct Interelectrode Capacitance (Approx.)<sup>a</sup></b>		
Plate to filament . . . . .	0.8	pF ←

### MECHANICAL

Operating Position . . . . .	Any
Type of Cathode . . . . .	Coated Filament
Maximum Overall Length . . . . .	2-3/16 in
Maximum Seated Length . . . . .	1-15/16 in
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16 ± 3/32 in
Diameter . . . . .	0.750 to 0.875 in
Dimensional Outline . . . . .	See General Section
Bulb . . . . .	T6-1/2
Socket . . . . .	See Operating Considerations
Base . . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW . . . . .	.9U



### HALF-WAVE PULSED RECTIFIER

#### Design-Maximum Ratings

Except as Noted

*For Operation in a 525-line, 30-frame system<sup>c</sup>*

#### Inverse Plate Voltage

Peak (Absolute-maximum value) <sup>d</sup> . . . . .	8250 <sup>e</sup>	V
DC . . . . .	7000	V

#### Plate Current

Peak . . . . .	50	mA ←
Average . . . . .	0.6	mA

#### Characteristics, Instantaneous Value

Tube Voltage Drop for plate mA = 1 . . . . .	20	V ←
--	----	-----

← Indicates a change.



RADIO CORPORATION OF AMERICA  
Electronic Components and Devices  
Harrison, N. J.

DATA  
9-65

## 2AV2

---

- a Without external shield.
- b See *Operating Considerations*.
- c As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations". Federal Communications Commission.
- d The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- e Under no circumstances should this absolute-maximum value be exceeded.

### OPERATING CONSIDERATIONS

*Socket Connections.* The base pins of the 2AV2 fit the Noval 9-contact socket. Socket terminals 2, 3, 6, 7, and 8 should not be used as tie points for external-circuit components. The socket should be made of material having low leakage and should have adequate insulation between its filament and plate terminals to withstand the maximum peak-inverse plate voltage. To provide the required insulation in Noval 9-contact sockets having a cylindrical center shield, it is necessary to remove the center shield. In addition, it is recommended that socket clips for pins 2, 3, 6, 7, and 8 be removed to minimize leakage and the possibility of arc-over.

*Measurement of Filament Voltage.* It is recommended that a thermal rms voltmeter be used to measure filament voltage. The meter and its leads must be insulated to withstand 15,000 volts. To minimize loading of the rectifier circuit during this measurement, stray capacitances to ground should be kept as low as possible.

*High Voltages.* The high voltage at which the 2AV2 is operated are very dangerous. Great care should be taken in the design of equipment to prevent the operator from coming in contact with these high voltages. Particular care against fatal shock should be taken in measuring the filament voltage particularly in those circuits where the filament is not grounded. In all cases, all circuit parts which may be at high potentials should be enclosed and interlock switches should be used to open the primary circuit of the high-voltage power supply when access to the equipment is required.

